



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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Victor
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1135570 - R8 SDMS

August 27, 2009

Mr. Paul Rumelhart
Kootenai Business Park Industrial District
P.O. Box 1071
Libby, MT 59923

Subject: Libby Asbestos Superfund Site
Operable Unit 5 – Former Stimson Lumber Property
Wood Chip Piles

Dear Paul:

You recently asked the U.S. Environmental Protection Agency to provide you with any available data we have related to the wood chip piles on the Former Stimson Lumber property, Operable Unit 5 of the Libby Asbestos Superfund Site.

In 2007, EPA collected a number of bulk samples from the top, middle, and bottom sections of the wood chip piles. Figure 2-7 (enclosed) shows the locations where samples were collected. Twenty (20) samples were analyzed qualitatively for Libby Asbestos (LA) using both Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM).

Using the PLM method, one of the samples contained a measurable concentration of Libby Asbestos. Libby Asbestos was not detected in any of the remaining 19 samples. Table 2-9 (enclosed) provides a summary of all bulk material sample results from this investigation.

Using the TEM method, four samples contained a measurable concentration of Libby Asbestos. Libby Asbestos was not detected in any of the remaining 16 samples. Table 2-10 (enclosed) provides a summary of all bulk material sample results from this investigation. Please note that we were not able to determine the LA concentration in the samples where LA was observed, only that LA was present.

Twelve (12) personal air samples were collected from the excavator operator and the sample collection personnel during the wood chip sampling activity. LA was not detected in any of the personal air samples. Table 2-11 (enclosed) provides a summary of all personal air sample results from this investigation. Please note that water suppression was used during the sampling effort due to fugitive dust emissions and our inability to restrict access to areas adjacent to the piles.

If you need any further information, please call me at (303) 312-6552.

Sincerely,



Rebecca J. Thomas
Project Manager

Enclosures

cc: Victor Ketellapper, EPR-SR
David Berry, EPR-SR





Table 2-9. Wood Chip Pile Bulk Material Sample Results - PLM-9002 Analysis

Sample ID	Property Group (Location)	Sample Date	Category	Matrix	Sample Group	Location Description (Sub Location)	Field Comments	Media Type	Analytical Results	
									Method	LA (%)
SL-70122-C	875 Highway 2 S	10/10/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-1, top 1-2ft	Bulk	PLM-9002	ND
SL-70135-C	875 Highway 2 S	10/10/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-5, middle 3-4ft	Bulk	PLM-9002	ND
SL-70139-C	875 Highway 2 S	10/10/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-10, bottom 7-8ft	Bulk	PLM-9002	ND
SL-70143-C	875 Highway 2 S	10/10/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-9, middle 3-4ft	Bulk	PLM-9002	ND
SL-70145-C	875 Highway 2 S	10/10/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-9, bottom 6-7ft	Bulk	PLM-9002	ND
SL-70159-C	875 Highway 2 S	10/10/2007	Field Sample	Wood Chips	Property	Wood chip piles	D-C-6, middle 4-5ft	Bulk	PLM-9002	ND
SL-70168-C	875 Highway 2 S	10/11/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-12, top 1-2ft	Bulk	PLM-9002	ND
SL-70173-C	875 Highway 2 S	10/11/2007	Field Duplicate	Wood Chips	Property	Wood Chips	D-C-16, top 0-1ft	Bulk	PLM-9002	ND
SL-70177-C	875 Highway 2 S	10/11/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-17, middle 3-4ft	Bulk	PLM-9002	ND
SL-70184-C	875 Highway 2 S	10/11/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-20, top 1-2ft; Debris pile with some rocks, 30% soil, 70% wood chips	Bulk	PLM-9002	DETECT
SL-70189-C	875 Highway 2 S	10/11/2007	Field Sample	Wood Chips	Property	Wood Chips	D-C-19, bottom 6-8ft	Bulk	PLM-9002	ND
SL-70193-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-34, top 1-2ft	Bulk	PLM-9002	ND
SL-70199-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-31, bottom 6-7ft	Bulk	PLM-9002	ND
SL-70203-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-32, middle 1-1.5ft	Bulk	PLM-9002	ND
SL-70211-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-29, bottom 4.5-5ft	Bulk	PLM-9002	ND
SL-70216-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-25, middle 2-3ft	Bulk	PLM-9002	ND
SL-70220-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-24, bottom of exposed bank 7-8ft	Bulk	PLM-9002	ND
SL-70227-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-21, middle 4-5ft	Bulk	PLM-9002	ND
SL-70231-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-23, 8-9ft	Bulk	PLM-9002	ND
SL-70234-C	875 Highway 2 S	10/12/2007	Field Sample	Wood Chips	Property	Wood chip pile	D-C-27, 3-4ft	Bulk	PLM-9002	ND

Notes and Definitions:

The report excludes all lab quality control results, such as those associated with Lab Blanks, Lab Duplicates, Re-Preparation, Re-count Same, Re-count Different, Verified Analysis, etc.

PLM = polarized light microscopy

LA = Libby Amphibole

ND = non-detect

% = percent

C = Chrysotile

< = less than

Table 2-10. Wood Chip Pile Bulk Material Sample Results - TEM Analysis

Sample ID	Property Group (Location)	Sample Date	Sample Group	Location Description (Sub Location)	Field Comments	Media Type	Matrix	Category	Method - ISO 10312	
									Grid Openings	Total Conc. LA
SL-70122	875 Highway 2 S	10/10/2007	Property	Wood chip pile	D-C-1, top 1-2ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70135	875 Highway 2 S	10/10/2007	Property	Wood chip pile	D-C-5, middle 3-4ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70139	875 Highway 2 S	10/10/2007	Property	Wood chip pile	D-C-10, bottom 7-8ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70143	875 Highway 2 S	10/10/2007	Property	Wood chip pile	D-C-9, middle 3-4ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70145	875 Highway 2 S	10/10/2007	Property	Wood chip pile	D-C-9, bottom 6-7ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70159	875 Highway 2 S	10/10/2007	Property	Wood chip piles	D-C-6, middle 4-5ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70168	875 Highway 2 S	10/11/2007	Property	Wood chip piles	D-C-12, top 1-2ft	Bulk	Wood Chips	Field Sample	10	DETECT
SL-70173	875 Highway 2 S	10/11/2007	Property	Wood chip piles	D-C-16, top 0-1ft	Bulk	Wood Chips	Field Duplicate	10	ND
SL-70177	875 Highway 2 S	10/11/2007	Property	Wood chip piles	D-C-17, middle 3-4ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70184	875 Highway 2 S	10/11/2007	Property	Wood chip piles	D-C-20, top 1-2ft; Debris pile with some rocks, 30% soil, 70% wood chips	Bulk	Wood Chips	Field Sample	5	DETECT
SL-70189	875 Highway 2 S	10/11/2007	Property	Wood chip piles	D-C-19, bottom 6-8ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70193	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-34, top 1-2ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70199	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-31, bottom 6-7ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70203	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-32, middle 1-1.5ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70211	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-29, bottom 4.5-5ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70216	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-25, middle 2-3ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70220	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-24, bottom of exposed bank 7-8ft	Bulk	Wood Chips	Field Sample	10	ND
SL-70227	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-21, middle 4-5ft	Bulk	Wood Chips	Field Sample	10	DETECT
SL-70231	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-23, 8-9ft	Bulk	Wood Chips	Field Sample	10	DETECT
SL-70234	875 Highway 2 S	10/12/2007	Property	Wood chip pile	D-C-27, 3-4ft	Bulk	Wood Chips	Field Sample	10	ND

Notes and Definitions:

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LA = Libby Amphibole

C = Chrysotile

ND = Non Detect

Table 2-11. Wood Chip Pile Personal Air Sample Results

Sample ID	Task	Property Group (Location)	Sample Date	Sample Group	Location Description (Sub Location)	Media Type	Matrix	Sample Type	Category	Vol (air=L)/ Area (dust=cm²)	Analytical Results (METHOD - ISO 10312) (Air = structures/cc)(Dust = structures/cm2)																														
											Grid Openings	Libby Amphiboles (LA)										Chrysotile (C)										Other Amphiboles (OA)									
												Excluded Structures					Structures Detected					Excluded Structures					Structures Detected					Excluded Structures					Structures Detected				
												Aspect Ratio < 5:1	Length < 0.5 u	Dia- meter > 0.5u	Length 0.5 to 5 u	Length 5 to 10 u	Length > 10 u	Total Conc. LA	Total Count LA	Aspect Ratio < 5:1	Length < 0.5 u	Dia- meter > 0.5u	Length 0.5 to 5 u	Length 5 to 10 u	Length > 10 u	Total Conc. C	Total Count C	Aspect Ratio < 5:1	Length < 0.5 u	Dia- meter > 0.5u	Length 0.5 to 5 u	Length 5 to 10 u	Length > 10 u	Total Conc. OA	Total Count OA						
SL-70120	Soil Sampling	875 Highway 2 S	10/10/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	318	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70121	Operator	875 Highway 2 S	10/10/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	311	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70140	Operator	875 Highway 2 S	10/10/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	418	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70141	Soil Sampling	875 Highway 2 S	10/10/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	437	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70183	Soil Sampling	875 Highway 2 S	10/11/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	330	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70184	Operator	875 Highway 2 S	10/11/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	328	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70182	Soil Sampling	875 Highway 2 S	10/11/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	140	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70183	Operator	875 Highway 2 S	10/11/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	155	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70180	Sampling	875 Highway 2 S	10/12/2007	Property	Wood chip pile	Air	Outdoor	Personal	Field Sample	362	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70191	Operator	875 Highway 2 S	10/12/2007	Property	Wood Chip Pile	Air	Outdoor	Personal	Field Sample	385	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70221	Sampling	875 Highway 2 S	10/12/2007	Property	Wood Chip Pile	Air	Outdoor	Personal	Field Sample	173	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SL-70222	Operator	875 Highway 2 S	10/12/2007	Property	Wood Chip Pile	Air	Outdoor	Personal	Field Sample	208	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							

Notes and Definitions:
The report excludes all lab quality control results, such as those associated with Lab Blanks, Lab Duplicates, Re-Preparation, Re-count Same, Re-count Different, Verified Analysis, etc.
N/A = not applicable
L = Liter
cm² = square centimeter
S/cc = Structures per cubic centimeter
S/cm² = Structures per square centimeter
LA = Libby Amphibole
C = Chrysotile
OA = Other Amphibole
< = less than
u = micron
> = greater than